

6202.0 - Labour Force, Australia, Sep 2004

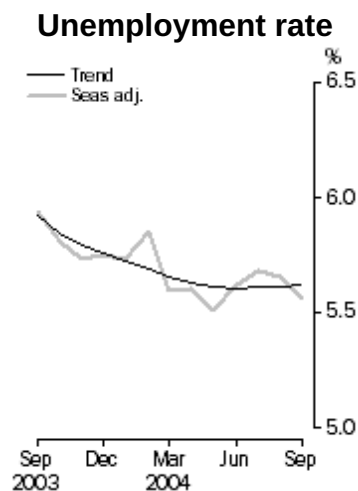
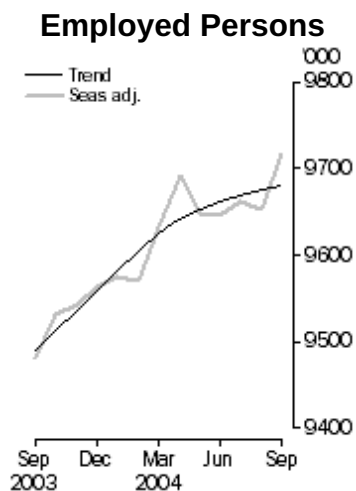
Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 07/10/2004

Summary

Main Features

SEPTEMBER KEY FIGURES

	Aug 2004	Sep 2004	Aug 04 to Sep 04	Sep 03 to Sep 04
Trend				
Employed persons ('000)	9,676.2	9,681.2	5.0	2.0%
Unemployed persons ('000)	575.5	577.1	1.6	-3.4%
Unemployment rate (%)	5.6	5.6	0.0pts	-0.3pts
Participation rate (%)	63.5	63.5	0.0pts	0.1pts
Seasonally Adjusted				
Employed persons ('000)	9,653.7	9,717.2	63.5	2.5%
Unemployed persons ('000)	579.0	572.4	-6.5	-4.5%
Unemployment rate (%)	5.7	5.6	-0.1pts	-0.4pts
Participation rate (%)	63.4	63.6	0.3pts	0.3pts



SEPTEMBER KEY POINTS

TREND ESTIMATES (MONTHLY CHANGE)

- EMPLOYMENT increased to 9,681,200
- UNEMPLOYMENT increased to 577,100
- UNEMPLOYMENT RATE remained at 5.6%
- PARTICIPATION RATE remained at 63.5%

SEASONALLY ADJUSTED ESTIMATES (MONTHLY CHANGE)

EMPLOYMENT

- increased by 63,500 to 9,717,200. Full-time employment increased by 19,100 to 6,960,700 and part-time employment increased by 44,400 to 2,756,500.

UNEMPLOYMENT

- decreased by 6,500 to 572,400. The number of persons looking for full-time work decreased by 4,400 to 402,400 and the number of persons looking for part-time work decreased by 2,100 to 170,000.

UNEMPLOYMENT RATE

- decreased by 0.1 percentage point to 5.6%. Both the male and female unemployment rates decreased by 0.1 percentage point, to 5.5% and 5.6% respectively.

PARTICIPATION RATE

- increased by 0.3 percentage points to 63.6%.

NOTES

IMPACT OF SURVEY RESPONSE RATES ON AUGUST ESTIMATES

The Labour Force Survey (LFS) usually achieves high levels of response from households selected for enumeration each month. Typically, the response rate for the LFS is around 97% nationally.

Operational difficulties during enumeration of the August 2004 survey resulted in a higher level of non-contact of households, and hence a lower than usual response rate - just over 94% nationally. Analysis conducted by the ABS subsequent to the publishing of August 2004 LFS results indicates that, due to this reduced response rate, the level of the Australian seasonally adjusted employment estimate for August may have been understated by between 15,000 and 25,000 persons. (As the standard error on the national employment estimate for August was 38,700 persons, an understatement of this size would be well within the bounds of expected sampling error.)

Any understatement in the estimated employment level for August would have affected the monthly movement in the seasonally adjusted estimate of employment between July and August as well as between August and September.

The reduction in response rates in August varied across the states and territories, but was most pronounced in NSW. Hence any understatement in August would have been greatest in NSW.

The response rate for the September LFS (close to 96% nationally) is still below the usual level. However, initial analysis of LFS data indicates that this reduced response rate has had no significant impact on the estimate of employment for September. The ABS will, however, continue to analyse data as response rates return to normal levels.

These changes to response rates have had no significant impact on the unemployment estimates.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Michael Johnson on Canberra (02) 6252 6525.

SAMPLING VARIABILITY

INTRODUCTION

Labour Force Survey (LFS) estimates are based on information obtained from a sample of the population, and are subject to sampling variability (or sampling error), i.e. they may be different from the figures that would have been obtained from an enumeration of the entire population. The expected magnitude of the sampling error depends on the sample design, the sample size and the population variability. One measure of the expected magnitude of the sampling error of an estimate is the standard error.

There is approximately a 95% chance that an estimate will differ from the true value by less than two standard errors. Hence an approximate 95% confidence interval is the region covering two standard errors either side of a survey estimate. The following table shows 95% confidence intervals for key LFS seasonally adjusted monthly movements between August and September.

Movements in seasonally adjusted series between August and September 2004

	Monthly change	95% Confidence interval		
Total Employment	63,500	26,300	to	100,700
Total Unemployment	-6 500	-20 100	to	7,100
Unemployment rate	-0.1 pts	-0.3 pts	to	0.1 pts
Participation rate	0.3 pts	0.1 pts	to	0.5 pts

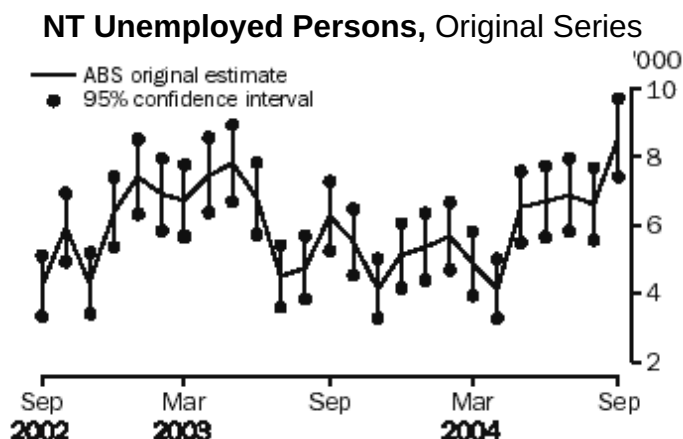
STATE AND TERRITORY ESTIMATES

The LFS is designed primarily to provide reliable estimates of the key labour force statistics for the whole of Australia and, secondarily, for each state and territory. The allocation of the sample across the states and territories is designed as a compromise between the accuracy of national estimates and state or territory estimates. The ABS routinely warns users that the estimates (especially for states and territories with smaller sample sizes) can have relatively

high sampling variability.

Example

LFS estimates of employed and unemployed persons for the Northern Territory exhibit substantial sampling variability, reflecting the relatively small sample enumerated there. In the Northern Territory, approximately 580 selections (private dwelling and non-private dwelling households) are surveyed each month compared with New South Wales (for example) where the number surveyed is around 7500. The following graph shows the unemployed persons original series for the Northern Territory, together with approximate 95% confidence intervals for each month's level estimate.



SAMPLE ROTATION

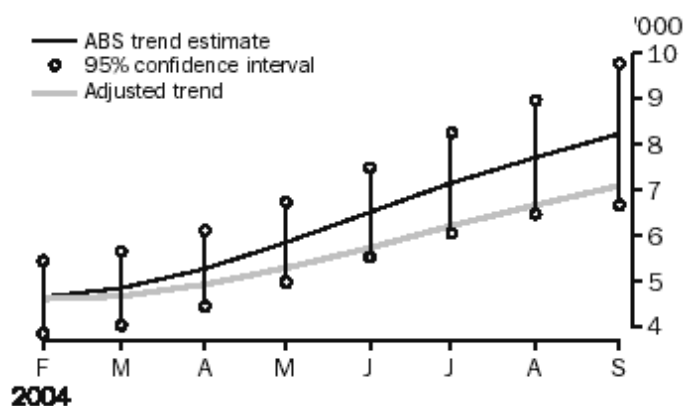
The LFS sample design provides for the replacement each month of around one-eighth of the sample. This rotation is generally to neighbouring households. Usually people in the new households have similar labour force characteristics to those of the people they are replacing, but occasionally the rotation is to a set of households with very different characteristics - this is a normal part of the random selection process, and can happen at any time. It contributes to the sampling variability of all LFS estimates, as reflected in the standard errors on pages 27 and 28 of this publication. However, especially when sample sizes are relatively small, the resultant changes in the estimates are not necessarily representative of real world changes.

Example

An example of the impact of sample rotation on sampling variability occurred in the Northern Territory between April and May 2004. In one particular area of the Northern Territory, the sample was rotated to a group of households with a much higher number of unemployed persons than is usually found in Northern Territory households.

The following graph shows the Northern Territory trend estimate of the number of unemployed persons as published, together with a trend estimate of unemployed persons as it would look if the persons in these households had the average characteristics of persons in the remaining sampled households. The vertical bars on each time point of the graph show a very approximate estimate of the 95% confidence interval around each point of the published trend series. The graph indicates the sensitivity of the trend estimate to some rotations of the sample.

NT Unemployed Persons, Trend Series



ENHANCEMENTS TO THE LFS

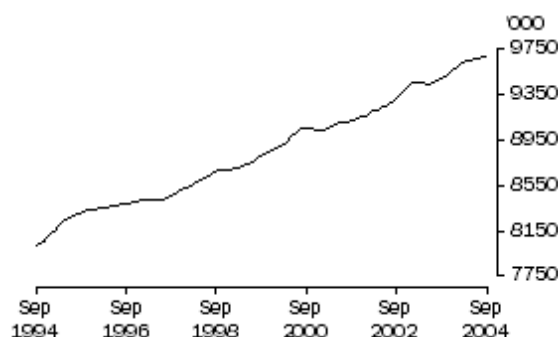
The ABS has introduced some changes to the LFS over the last year that have helped to reduce monthly volatility, such as the use of concurrent seasonal adjustment and regional population benchmarks.

The ABS is also looking at further reducing volatility in LFS estimates by using improved estimation techniques to adjust for households with unusual characteristics. This is expected to lead to more robust estimates for states and territories with smaller samples (such as the Northern Territory). It is hoped that these changes can be implemented by mid 2005.

PRINCIPAL LABOUR FORCE SERIES TREND ESTIMATES

EMPLOYED PERSONS

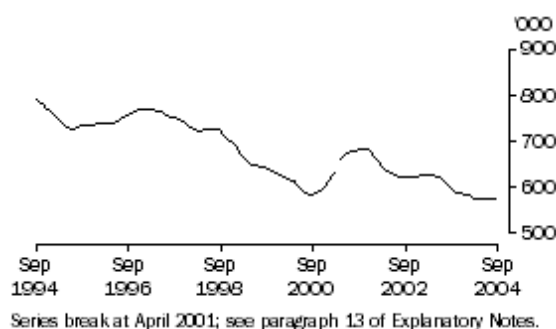
The trend estimate of employed persons generally rose from a low of 7,637,500 in December 1992 to 9,054,900 in September 2000. The trend then fell slightly to 9,033,700 in January 2001, before rising to 9,464,200 in March 2003. The trend then fell for three months before rising to stand at 9,681,200 in September 2004.



UNEMPLOYED PERSONS

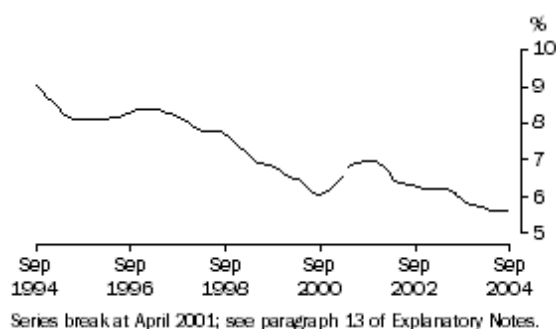
The trend estimate of unemployed persons fell rapidly from 920,700 in September 1993 to 728,100 in July 1995. The trend then rose to 771,700 in February 1997, before falling to

583,500 in September 2000. After rising to 685,200 in October 2001, the trend has generally fallen to stand at 577,100 in September 2004.



UNEMPLOYMENT RATE

The trend unemployment rate fell rapidly from 10.7% in August 1993 to 8.1% in July 1995. The trend then rose slowly, reaching 8.4% in February 1997, before falling to 6.1% in September 2000. After rising to 7.0% in October 2001, the trend has since generally fallen to stand at 5.6% in September 2004.



About this Release

ABOUT THIS RELEASE

Summary results of the monthly Labour Force Survey containing estimates of employed and unemployed persons classified by sex, full-time/part-time status, states and territories and some age groups; and persons not in the labour force.

6202.0 was published as Labour Force, Australia, Preliminary until March 2003. As the publication had provided final summary data for a number of years to that point, the misleading qualification preliminary was removed from the April 2003 issue onwards.

Explanatory Notes

Explanatory Notes

INTRODUCTION

1 This publication contains estimates of the civilian labour force derived from the Labour Force Survey component of the Monthly Population Survey. The full time series for estimates from this publication are also available electronically - see **Labour Force, Australia, Spreadsheets (cat. no. 6202.0.55.001)**. More detailed estimates are released one week after this publication in various electronic formats - see **Labour Force, Australia, Detailed - Electronic Delivery** (cat. no. 6291.0.55.001).

CONCEPTS, SOURCES AND METHODS

2 The conceptual framework used in Australia's Labour Force Survey aligns closely with the standards and guidelines set out in Resolutions of International Conferences of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling the estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001) which is available on the ABS web site <<https://www.abs.gov.au>> (Methods, Classifications, Concepts & Standards).

MONTHLY POPULATION SURVEY

3 The population survey is based on a multi-stage area sample of private dwellings (currently about 30,000 houses, flats, etc.) and a list sample of non-private dwellings (hotels, motels, etc.), and covers about 0.45% of the population of Australia. The information is obtained from the occupants of selected dwellings by specially trained interviewers. The information obtained relates to the week before the interview (i.e. the reference week).

4 Households selected for the Labour Force Survey are interviewed each month for 8 months, with one eighth of the sample being replaced each month. The first interview is conducted face-to-face. Subsequent interviews are conducted by telephone (if acceptable to the respondent).

5 Information is collected using computer-assisted interviewing (CAI), whereby responses are recorded directly onto an electronic questionnaire on a notebook computer. The CAI method was progressively implemented from October 2003 to August 2004, replacing the 'pen and paper' method previously used.

6 The interviews are generally conducted during the two weeks beginning on the Monday between the 6th and 12th of each month. Each year, to deal with operational difficulties involved with collecting and processing the Labour Force Survey around the Christmas and New Year holiday period, interviews for December start four weeks after November interviews start, and January interviews start five weeks after December interviews start. As a result, January interviewing may commence as early as the 8th or as late as the 14th, depending on the year. Occasionally, circumstances that present significant operational difficulties for survey collection can result in a change to the normal pattern for the start of interviewing.

7 Estimates from the Labour Force Survey are published first in this publication 31 days after

the commencement of interviews for that month, with the exception of estimates for each December which are published 38 days after the commencement of interviews.

SCOPE OF SURVEY

8 The Labour Force Survey includes all persons aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

COVERAGE

9 In the Labour Force Survey, coverage rules are applied which aim to ensure that each person is associated with only one dwelling, and hence has only one chance of selection. The coverage rules are necessarily a balance between theoretical and operational considerations. Nevertheless, the chance of a person being enumerated at two separate dwellings in the survey is considered to be negligible.

POPULATION BENCHMARKS

10 Labour Force Survey estimates are calculated in such a way as to add up to independent estimates of the civilian population aged 15 and over (population benchmarks). From February 2004, labour force estimates have been compiled using benchmarks based on the results of the 2001 Census of Population and Housing. Revisions were made to historical estimates from January 1999 to January 2004.

COMPARABILITY OF SERIES

11 From April 1986, the definition of employed persons was changed to include persons who worked without pay between 1 and 14 hours per week in a family business or on a farm (i.e. contributing family workers). For further information, see paragraphs 36 and 37 of the Explanatory Notes to the February 1987 issue of **Labour Force, Australia (cat. no. 6203.0)**.

12 The ABS introduced telephone interviewing into the Labour Force Survey in August 1996. Implementation was phased in for each new sample group from August 1996 to February 1997. During the period of implementation, the new method produced different estimates than would have been obtained under the old methodology. The effect dissipated over the final months of implementation and was no longer discernible from February 1997. The estimates for February 1997 and onwards are directly comparable to estimates for periods prior to August 1996. For further details, see the feature article in the June 1997 issue of **Labour Force, Australia (cat. no. 6203.0)**.

13 From April 2001 the Labour Force Survey has been conducted using a redesigned questionnaire containing additional data items and some minor definitional changes. The

definition of unemployed persons was changed to include all persons who were waiting to start work and were available to start in the reference week. This change was introduced in February 2004, when historical unit record data were revised from April 2001 to January 2004. This revision created a small trend break at April 2001 in unemployed persons and unemployment rate series. For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0).

14 Core labour force series were revised in April 2001 for the period April 1986 to March 2001 for the remaining definitional changes introduced with the redesigned questionnaire, to reduce the impact of the changes on labour force series. For further details, see **Information Paper: Implementing the Redesigned Labour Force Survey Questionnaire** (cat. no. 6295.0) and **Information Paper: Questionnaires Used in the Labour Force Survey** (cat. no. 6232.0).

SURVEY SAMPLE REDESIGN

15 The Labour Force Survey sample was last reselected using information collected in the 2001 Census of Population and Housing.

16 The bulk of the new sample was phased in over the period November 2002 to June 2003, with one eighth of this portion of the sample being introduced every month. The remainder of the sample (about 18% of the total), which covers less settled areas of Australia and non-private dwellings was rotated in full for New South Wales, Victoria, Tasmania, Northern Territory and Australian Capital Territory in November 2002, and for Queensland, South Australia and Western Australia in December 2002. Such a pattern of implementation means that any changes to labour force estimates due to differences between the two samples, or any other influences, were spread over the eight months.

17 For further details, see **Information Paper: Labour Force Survey Sample Design** (cat. no. 6269.0) and **Technical Report: New Labour Force Survey sample selections: analysis of the effect on estimates** in the October 2003 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

RELIABILITY OF ESTIMATES

18 Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error.

Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors of estimates for the latest month and of estimates of movements since the previous month are shown on pages 27 and 28. Standard errors of other estimates and other movements may be determined by using information in **Information Paper: Labour Force Survey Standard Errors** (cat. no. 6298.0) which is available free on the ABS web site <<https://www.abs.gov.au>> (Papers & Articles). **Non sampling error** arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise reporting error by the careful design of questionnaires,

intensive training and supervision of interviewers, and efficient data processing procedures.

SEASONAL ADJUSTMENT AND TREND ESTIMATION

19 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular month. This means that month-to-month movements of the seasonally adjusted estimates may not be reliable indicators of trend behaviour.

20 The Labour Force Survey uses the concurrent seasonal adjustment method to derive seasonal factors. Concurrent seasonal adjustment uses data up to the current month to estimate seasonal factors for the current and all previous months. This process can result in revisions each month to estimates for earlier periods. However, in most instances, the only noticeable revisions will be to the seasonally adjusted estimates for the previous month and one year prior to the current month.

21 Seasonal adjustment is able to remove the effect of events which occur at the same time in the survey every year. However, there are some events, like holidays, which are not always at the same time in the survey cycle or which are not at the same time across Australia. The effects of these types of events on LFS estimates cannot in all cases be removed, because the pattern of their effects cannot be determined. However, two events which are adjusted for in the seasonally adjusted series are the January interview start date and the timing of Easter.

22 For more information on concurrent seasonal adjustment and survey proximity to holiday periods, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0).

23 While seasonal factors for the complete time series are estimated each month, they will continue to be reviewed annually at a more detailed level to take into account each additional year's original data. This annual review will not normally result in significant changes to published estimates. The review will be conducted in February each year with the results released in the February issue of this publication.

24 The smoothing of seasonally adjusted series to produce 'trend' series reduces the impact of the irregular component of the seasonally adjusted series. These trend estimates are derived by applying a 13-term Henderson-weighted moving average to all months except the last six. The last six monthly trend estimates are obtained by applying surrogates of the Henderson average to the seasonally adjusted series. Trend estimates are used to analyse the underlying behaviour of a series over time.

25 While this smoothing technique enables estimates to be produced for the latest month, it does result in revisions in addition to those caused by the revision of seasonally adjusted estimates. Generally, revisions due to the use of surrogates of the Henderson average become smaller, and after 3 months have a negligible impact on the series.

26 Trend estimates are published for the Northern Territory in table 10 and for the Australian Capital Territory in table 11. Unadjusted series for the two territories have shown, historically, a high degree of variability, which can lead to considerable revisions to the seasonally adjusted estimates each month when seasonal factors are estimated. For this reason, seasonally adjusted estimates are not currently published for the two Territories. In addition, caution should be exercised in the interpretation of trend estimates for the two territories, particularly for the three most recent months, where revisions may be relatively large.

27 For further information, see **A Guide to Interpreting Time Series - Monitoring 'Trends': an Overview** (cat. no. 1348.0) or contact the Assistant Director, Time Series Analysis on (02) 6252 6345.

RELATED PUBLICATIONS

28 Users may also wish to refer to **Australian Labour Market Statistics** (cat. no. 6105.0). This publication contains additional tables and a detailed list of related publications. For further information about this publication, please contact the Assistant Director, Labour Market Statistics on (02) 6252 7636.

29 ABS Information about the labour market can be found on the Labour theme page on the ABS web site <[http:// www.abs.gov.au](http://www.abs.gov.au)>(Themes), or from ABS Bookshops.

30 Current publications and other products released by the ABS are listed in the **Catalogue of Publications and Products (cat. no. 1101.0)**. The Catalogue is available from any ABS office or the ABS web site <<https://www.abs.gov.au>> (AusStats). The ABS also issues a daily Release Advice on the web site (AusStats) which details products to be released in the week ahead.

DATA AVAILABLE ON REQUEST

31 As well as the statistics included in this and related publications, the ABS may have other relevant data available. Inquiries should be made to Michael Johnson on (02) 6252 6525 or to any ABS office.

EFFECTS OF ROUNDING

32 Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

33 Estimates of movement shown in this publication are obtained by taking the difference of unrounded estimates. The movement estimate is then rounded to one decimal place. Therefore where a discrepancy occurs between the reported movement and the difference of the rounded estimates, the reported movement will be more accurate.

SYMBOLS AND OTHER USAGES

34 SYMBOLS AND OTHER USAGES

pts percentage points

Glossary

Actively looking for work

Includes writing, telephoning or applying in person to an employer for work; answering an advertisement for a job; checking factory noticeboards or the touchscreens at the Centrelink offices; being registered with Centrelink as a jobseeker; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

Attending full-time education

Persons aged 15 to 24 years enrolled at secondary or high school or enrolled as a full time student at a Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

Attending school

Persons aged 15 to 19 years enrolled at secondary or high school in the reference week.

Attending tertiary educational institution full time

Persons aged 15 to 24 years enrolled full time at a TAFE college, university, or other educational institution in the reference week, except those persons aged 15 to 19 years who were still attending school.

Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

Employed

All persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Employment to population ratio

For any group, the number of employed persons expressed as a percentage of the civilian population in the same group.

Full-time workers

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Labour force

For any group, persons who were employed or unemployed, as defined.

Labour force status

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

Not in labour force

Persons who were not in the categories employed or unemployed as defined.

Participation rate

For any group, the labour force expressed as a percentage of the civilian population aged 15

years and over in the same group.

Part-time workers

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Seasonally adjusted series

A time series of estimates with the estimated effects of normal seasonal variation removed. See Explanatory Notes 19 to 23 for more detail.

Trend series

A smoothed seasonally adjusted series of estimates. See Explanatory Notes 24 to 26 for more detail.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unemployed looking for full-time work

Unemployed persons who:

- actively looked for full-time work; or
- were waiting to start a new full-time job.

Unemployed looking for part-time work

Unemployed persons who:

- actively looked for part-time work only; or
- were waiting to start a new part-time job.

Unemployment rate

For any group, the number of unemployed persons expressed as a percentage of the labour

force in the same group.

Unemployment to population ratio

For any group, the number of unemployed persons expressed as a percentage of the civilian population in the same group.

What If

WHAT IF...? REVISIONS TO TREND ESTIMATES

EFFECT OF NEW SEASONALLY ADJUSTED ESTIMATES ON TREND ESTIMATES

TREND REVISIONS

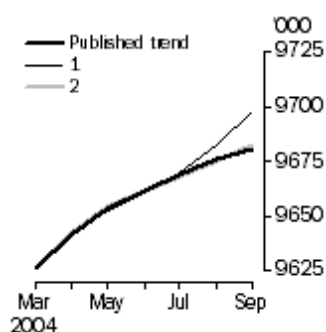
Each time new seasonally adjusted estimates become available, trend estimates are revised. This revision is a combined result of the concurrent seasonal adjustment process and the application of surrogates of the Henderson average to the seasonally adjusted series (see paragraphs 19 to 25 of Explanatory Notes).

The examples in the tables below show two illustrative scenarios and the consequent revisions to previous trend estimates of employment and the unemployment rate. The revisions in the scenarios below are only due to the use of surrogates of the Henderson average, as the impact of revision of the seasonally adjusted estimates can not be estimated in advance.

1. The October seasonally adjusted estimate is **higher** than the September estimate by:
0.27% for employment
1.78% for the unemployment rate
2. The October seasonally adjusted estimate is **lower** than the September estimate by:
0.27% for employment
1.78% for the unemployment rate

The percentage changes of 0.27% and 1.78% were chosen because they represent the average absolute monthly percentage changes in employment and the unemployment rate respectively.

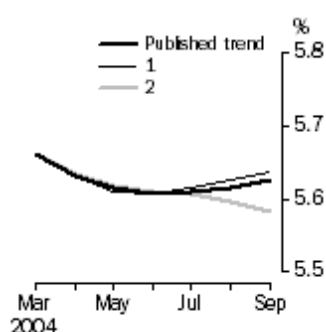
Employment



WHAT IF NEXT MONTH'S SEASONALLY ADJUSTED ESTIMATE IS:

	Trend as published	(1) 9743.5 i.e. rises by 0.27%	(2) 9691.0 i.e. falls by 0.27%
2004			
June	9,661.5	9,660.9	9,661.8
July	9,668.5	9,670.3	9,668.0
August	9,676.2	9,682.9	9,675.1
September	9,681.2	9,697.6	9,682.9

Unemployment Rate



WHAT IF NEXT MONTH'S SEASONALLY ADJUSTED ESTIMATE IS:

	Trend as published	(1) 5.7 i.e. rises by 1.78%	(2) 5.5 i.e. falls by 1.78%
2004			
June	5.6	5.6	5.6
July	5.6	5.6	5.6
August	5.6	5.6	5.6
September	5.6	5.6	5.6

Technical Note

STANDARD ERRORS

The estimates in this publication are based on information gained from the occupants of a sample survey of dwellings. Because the entire population is not surveyed, the published estimates are subject to sampling error. The most common way of quantifying such sampling error is to calculate the standard error for the published estimate or statistic. For more information, see paragraph 18 of the Explanatory Notes.

LEVEL ESTIMATES

To illustrate, let us say the published level estimate for employed persons aged 15 to 19 is 700,000. The calculated standard error in this case is 9,800. The standard error is then used to interpret the level estimate of 700,000. For instance, the standard error of 9,800 indicates that:

- There are approximately two chances in three that the real value falls within the range 690,200 to 709,800 ($700,000 \pm 9,800$)
- There are approximately nineteen chances in twenty that the real value falls within the range 680,400 to 719,600 ($700,000 \pm 19,600$).

The real value in this case is the result we would obtain if we could enumerate the total

population.

The following table shows the standard errors for this month's level estimates.

AUSTRALIA													
NSW Vic. Qld SA WA Tas. NTACT Males Females Persons													
Aged 15 and over													
Employed													
	Full time	'000	19.0	14.2	11.4	5.1	5.5	1.9	1.2	1.8	21.9	16.3	29.5
	Part time	'000	10.8	9.0	7.8	3.7	4.1	1.4	0.8	1.2	10.4	14.9	17.1
	Total	'000	23.0	17.2	12.9	5.9	6.1	2.1	1.4	2.1	24.2	21.3	39.6
Unemployed													
	Looking for f/t work	'000	4.9	4.1	3.5	1.7	1.9	0.7	0.5	0.5	6.6	5.5	7.9
	Looking for p/t work	'000	3.7	3.1	2.5	1.2	1.4	0.5	0.4	0.4	4.1	4.8	5.8
	Total	'000	5.5	4.7	4.1	2.0	2.2	0.8	0.6	0.6	7.3	6.7	9.1
Labour force													
Not in labour force													
Unemployment rate													
	Looking for f/t work	pts	0.2	0.2	0.2	0.3	0.3	0.5	0.6	0.4	0.1	0.2	0.1
	Looking for p/t work	pts	0.4	0.4	0.4	0.5	0.5	0.7	1.4	0.8	0.5	0.2	0.2
	Total	pts	0.2	0.2	0.2	0.3	0.2	0.4	0.6	0.3	0.1	0.1	0.1
Participation rate													
pts 0.4 0.4 0.4 0.5 0.4 0.6 1.0 0.8 0.3 0.3 0.3													
Aged 15 - 19													
Employed													
	Full time	'000	4.1	2.9	3.2	1.3	1.9	0.6	0.3	0.4	5.4	4.5	6.4
	Part time	'000	5.1	4.2	4.0	1.8	2.2	0.7	0.4	0.6	6.2	6.8	8.4
	Total	'000	5.9	4.7	4.8	2.1	2.6	0.8	0.5	0.7	7.5	7.5	9.8
Unemployed													
	Looking for f/t work	'000	2.6	1.8	1.7	0.8	1.0	0.3	0.3	0.3	3.2	2.6	3.9
	Looking for p/t work	'000	2.9	2.3	1.7	0.9	1.0	0.3	0.3	0.3	3.1	3.4	4.3
	Total	'000	3.6	2.7	2.2	1.2	1.3	0.4	0.4	0.4	4.2	4.0	5.3
Labour force													
Not in labour force													
Unemployment rate													
	Looking for f/t work	pts	3.0	3.4	2.3	3.9	2.6	4.2	10.2	5.7	1.8	2.4	1.4
	Looking for p/t work	pts	1.7	1.6	1.5	2.2	1.8	2.8	5.1	3.1	1.3	1.1	0.8
	Total	pts	1.4	1.4	1.2	1.9	1.4	2.2	4.4	2.5	1.0	1.0	0.6
Participation rate													
pts 1.4 1.5 1.9 2.2 1.9 2.6 4.1 3.0 1.1 1.2 0.8													
Unemployment to population ratio - looking for f/t work													
pts 0.6 0.5 0.6 0.8 0.7 1.0 2.1 1.1 0.5 0.4 0.3													

MOVEMENT ESTIMATES

The following example illustrates how to use the standard error to interpret a movement estimate. Let us say that one month the published level estimate for females employed part time in Australia is 1,890,000; the next month the published level estimate is 1,900,000. The calculated standard error for the movement estimate is 10,300. The standard error is then used to interpret the published movement estimate of 10,000. For instance, the standard error of 10,300 indicates that:

- There are approximately two chances in three that the real movement between the two months falls within the range -300 to 20,300 (10,000 + or - 10,300)
- There are approximately nineteen chances in twenty that the real movement falls within the range -10,600 to 30,600 (10,000 + or - 20,600).

The following table shows the standard errors for this month's movement estimates.

AUSTRALIA

NSW Vic. Qld SA WA Tas. NT ACT Males Females Persons

Aged 15 and over											
Employed											
	Full time	'000	10.0	7.6	7.0	3.2	3.9	1.3	1.1	1.0	14.2
	Part time	'000	7.2	5.7	5.0	2.4	2.9	1.0	0.7	0.7	7.7
	Total	'000	11.2	8.6	7.9	3.6	4.4	1.4	1.2	1.1	15.1
Unemployed											
	Looking for f/t work	'000	3.7	3.0	2.5	1.2	1.5	0.5	0.4	0.4	5.0
	Looking for p/t work	'000	2.7	2.3	1.9	0.9	1.1	0.4	0.3	0.3	3.2
	Total	'000	4.2	3.4	2.9	1.4	1.7	0.6	0.5	0.4	5.5
Labour force											
Not in labour force											
Unemployment rate											
	Looking for f/t work	pts	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.1
	Looking for p/t work	pts	0.3	0.3	0.3	0.4	0.4	0.5	1.2	0.6	0.4
	Total	pts	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.2	0.1
Participation rate											
Aged 15 - 19											
Employed											
	Full time	'000	3.0	2.2	2.4	0.9	1.4	0.4	0.3	0.3	4.1
	Part time	'000	3.9	3.1	2.8	1.3	1.6	0.5	0.4	0.4	4.7
	Total	'000	4.4	3.4	3.3	1.4	1.9	0.6	0.4	0.5	5.7
Unemployed											
	Looking for f/t work	'000	2.0	1.4	1.4	0.6	0.8	0.3	0.2	0.2	2.6
	Looking for p/t work	'000	2.2	1.7	1.4	0.7	0.9	0.3	0.2	0.2	2.5
	Total	'000	2.6	2.0	1.7	0.9	1.1	0.3	0.3	0.3	3.2
Labour force											
Not in labour force											
Unemployment rate											
	Looking for f/t work	pts	2.3	2.6	1.9	3.2	2.3	3.6	8.5	4.6	1.4
	Looking for p/t work	pts	1.3	1.3	1.2	1.7	1.5	2.2	4.2	2.4	1.1
	Total	pts	1.0	1.0	1.0	1.4	1.1	1.7	3.7	2.0	0.8
Participation rate											
Unemployment to population ratio - looking for f/t work											
		pts	0.4	0.4	0.5	0.6	0.6	0.8	1.7	0.9	0.4

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